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09-12-13

MULTIFORM

Passive RGB LED panels

USER MANUAL

MultiSpot HT3012

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Introduction

Dear Customer,
Congratulations on the purchase of the Multispot HT3012 LED fixture from Apollo. Apollo is the US exclusive distributor for Multiform, a leading global manufacturer of professional lighting equipment with decades of experience in design, production and quality assurance.

To meet your requirements this unit has been designed and built to the highest standards, so we can assure that you have made a sound investment. To take full advantage of all possibilities and for your own safety and the safety of your environment, please read these operating instructions carefully before you start using the unit.

Product description *(check package which applies)*

The **Multispot HT3012** is an RGB LED panel. The HT3012 LED panel uses 12 ultra-bright 3W RGB LEDs and provides a unique solution for all indoor applications that require a medium angle, high-brightness color-mixing spot light with maximum ease of use - from club to stage lighting, from commercial to architectural purposes.

Optional Accessories

Optional accessories include a Mounting Tab Kit and Gel/Diffusion Frames. The Mounting Tab Kit includes three tabs and hardware required to mount to the front of the HT3012 unit to allow for the use of a Gel/Diffusion Frame. The Gel/Diffusion Frame comes with a piece of one of three high-transmission materials to change the beam angle from 27° to 32°, 40°, or 65°.

Warranty

Items are covered for defects in materials and workmanship for one year, including repair parts and repair labor on defective item, from date of Apollo invoice. The warranty covers freight for 30 days after initial purchase. Apollo does not cover any other loss resulting from product failure.

Products being returned for warranty repair must display the original serial number sticker. Removal of the serial number sticker voids the product's limited warranty.

- Despite the care taken for the compilation of this book, Apollo Design Technology, Inc cannot be held responsible for any damages resulting from errors that may appear in this book. All efforts have been made to provide the most accurate, up-to-date instructions and illustrations possible.
- Need assistance? Call Apollo at 800-288-4626 for details.

Keep this information handy if requiring technical assistance.

Serial Number	
Date Purchased	
Purchased From	

"dP" DMX Preset Mode

If you want to run the pre-programmed patterns and scenes by an external DMX-controller you can use the DMX Preset Mode. Press the MODE button (5) until the display shows "dP", indicating operation in DMX Preset mode. Set the DMX starting address by using the UP/DOWN buttons (6/7).

When set to this mode, the unit requires 4 DMX channels.

If DMX-value of channel 3 is **lower than 50** the unit works with static colors:

DMX Channel	Value Range	Function
CH1	000-255	Output color choice from presets (see "C" mode)
CH2	000-255	Master output level
CH3	000-049	Static color mode active
CH4	000-049	Strobe off
	050-255	Strobe (050=slow / 255=max. speed 23 Hz)

Output mix presets can be activated by means of CH1. The chosen mix can be adjusted with CH2. If the value of CH4 is above 50 the unit is set to strobe mode. The strobe speed for any fixed output mix chosen on the first channel can be adjusted from zero (value <50) to 23 cycles per second (value 255).

If DMX value of channel 3 is **equal or higher than 50** the unit works in pattern mode:

CH1	Pattern	CH1	Pattern
000-015	Soft fade Red Green	**136-150**	Hard fade Green Blue
016-030	Soft fade Green Blue	**151-165**	Hard fade Red Blue
031-045	Soft fade Red Blue	**166-180**	Hard fade Red Yellow
046-060	Soft fade Red Yellow	**181-195**	Hard fade Hot Pink Lime
061-075	Soft fade Hot Pink Lime	**196-210**	Hard fade Pink Blue
076-090	Soft fade Pink Blue	**211-225**	Hard fade Turquoise Pink
091-105	Soft fade Turquoise Pink	**226-240**	Hard fade Red Green Blue
106-120	Soft fade Red Green Blue	**241-255**	Hard fade All Colors
121-135	Hard fade Red Green		

DMX	Value range	Function
CH2	000-255	Level
CH3	050-255	Chase speed
CH4	000-049	Stobe off
	050-255	Strobe (050=slow / 255=max. speed 23 Hz)

In this mode the knob (1) is disabled.

Addressing has to be done as follows:

001 first device **(CH 1-4)** *factory default*
005 second device **(CH 5-8)**
009 third device **(CH 9-12)**
013 fourth device (**CH 13-16)** and so on.

Security advice before use

Warning: Read this section carefully before installing, powering, operating, cleaning or servicing this product!

The following symbols are used to identify important safety information in this manual:

Safety hazard. Risk of injury or death.

Hazardous voltage. Risk of severe or fatal electric shock.

Fire hazard.

LED light emission. Risk of severe eye damage.

Read manual before installation and operation.

General advice:

1. Read this manual completely before using the product.
2. Keep this manual in your records for future reference.
3. Follow all instructions printed in this manual, otherwise warranty may become void.
4. Follow all printed security advice on the product. The lightning flash with arrowhead within an equilateral triangle warns of non-insulated AC main voltage inside the unit. The exclamation mark within an equilateral triangle warns of important operating and maintenance instructions in the literature attached to this product. Failure to follow all printed instructions in this manual may void the warranty.
5. Carry this product with care. Dropping or heavy vibration may damage this product mechanically and/or electrically.
6. The manufacturer takes no responsibility for injury or damage caused by not following the safety precautions and instructions printed within this manual.

Warning! Class 1M LED product.

1. Do not look into the beam from a distance of less than 16 inches (40 cm).
2. Do not stare into the beam for extended periods at a short distance.
3. Do not view the beam directly with optical instruments such as magnifiers.

Protection from electric shock:

1. Do not expose this unit to any dripping or splashing liquids. Do not submerge unit. Do not place objects filled with liquids on the unit. Do not operate this unit near open water or in high humidity.
2. Do not open the unit for service purposes. There are no user-serviceable parts inside. Warranty will be void in any case of unauthorized service by the user or other persons.

Protection from fire:

1. Take care not to place the unit near sources of heat (e.g. powerful amplifiers, fog machines).
2. Allow at least 6" between this unit and other devices or a wall to allow for proper cooling.
3. Be sure this fixture is kept at least 24" away from any flammable materials.
4. Allow sufficient air convection in the unit's environment to avoid overheating. Make sure air convection slots are not blocked. Do not operate this unit in environmental temperatures exceeding 105° Fahrenheit.
5. Do not attach gel or diffusion directly to the front of the LEDs unless using accessories on page 9.

Protection from injury and damage:

1. Never use accessories or modifications not authorized by the manufacturer of this unit.
2. Choose a location for operation where the unit is protected from vibration and where a fixed mounting position is provided. In case of overhead mounting, follow appropriate rigging rules and regulations for rigging safety, including the use of an approved safety cable. Our units ship with integral power supplies.
3. The connection to a power supply must be carried out by qualified and certified personnel only.
4. Do not expose this unit to any dripping or splashing liquids. Do not operate this unit near or in open water or in high humidity.

There are no user serviceable parts in the unit. Return the unit to qualified personnel for repair.

Health advice

This unit produces and absorbs electromagnetic radiation. The strength of radiation and the sensitivity for disturbing interference conforms with CE and FCC requirements. A corresponding sign is printed on the backside of the unit. Any change or modification may affect the operation of the unit's electromagnetic radiation. Any modification to the unit will void all electrical certification. The manufacturer/distributor takes no responsibility in this case.

Functional advice

This unit is immune to the presence of electromagnetic disturbances – both conducted and radiated - up to a certain level. Under peak conditions, the unit is classified to show a "class C" performance criteria and may encounter temporary degradation or loss of function. In such a case, power down the connected power supply and power it on again to recover.

Environmental advice

This unit is built to conform to the ROHS standards and the WEEE directive 2002/96/EC of the European Parliament and of the Council of the European Union. Under these regulations, the product shall not be discarded into regular garbage at the end of its life, but shall be returned to authorized recycling stations. It is highly recommended that North American users follow environmentally safe disposal/recycling practices.

Unpacking

Please check that the box contains the following items:

Main parts: 1 Multispot HT3012
1 operation manual
Accessory parts: 1 M6 security lug
1 power cable

If any part is missing, please contact your dealer immediately for replacement.

"d4" DMX Mode

Press the MODE button (5) until the display shows "d4", indicating operation in 4 channel DMX mode. Shortly after that, the display shows the DMX starting address. Set DMX address by using the UP/DOWN buttons (6/7).

In this mode the knob (1) is disabled.

When set to this mode, the unit requires 4 DMX channels.

DMX channel	Value Range	Function
CH1	000-255	Red level
CH2	000-255	Green level
CH3	000-255	Blue level
CH4	000-127	Master output level
	128-227	Strobe (128=slow / 227=max. speed 23 Hz)
	228-255	Master level full on, Strobe off

Addressing has to be done as follows:

001 first device **(CH 1-4)** *factory default*
005 second device **(CH 5-8)**
009 third device **(CH 9-12)**
013 fourth device **(CH 13-16)** and so on.

This setting is stored even if the device is switched off.

"d5" DMX Mode – 5 channels

Press the Mode button (5) until the display shows "d5", indicating operation in 5 channel DMX mode. Shortly after that, the display shows the DMX starting address. Set DMX address by using the UP/DOWN buttons (6/7).

In this mode, the knob (1) is disabled.

When set to this mode, the unit requires 5 DMX channels.

DMX channel-	Value Range	Function
CH1	000-255	Red level
CH2	000-255	Green level
CH3	000-255	Blue level
CH4	000-255	Master output level
CH5	000-049	Strobe off
	050-255	Strobe (050=slow / 255=max. speed 23 Hz)

Addressing has to be done as follows:

001 first device **(CH 1-5)** *factory default*
006 second device **(CH 6-10)**
011 third device **(CH 11-15)**
016 fourth device **(CH 16-20)** and so on.

This setting is stored even if the device is switched off.

"C" Color Mode

Press the MODE button (5) until the first digit on the display shows "C", indicating operation in "color" mode. Choose a color by using the UP/DOWN buttons (6/7), see list below.

NOTE: The "C" Mode is automatically disabled when an external DMX signal is present.

Knob (1) determines the output level.

Available color presets:

C 0	all off	**C10**	Blue Green
C 1	Red	**C11**	Lavender
C 2	Green	**C12**	Hot Pink
C 3	Blue	**C13**	Flesh
C 4	Yellow	**C14**	Light Blue Green
C 5	Pink	**C15**	Light Green
C 6	Turquoise	**C16**	Light Purple
C 7	Lime	**C17**	Light Lavender
C 8	Orange	**C18**	Light Blue
C 9	Marine	**C19**	White

DMX Modes

NOTE: To use unit in slave mode, select the "d3" DMX Mode. The unit will receive DMX data from another unit which is in "A" or "C" mode and must be set to channel 1.

The unit receives DMX data and mirrors the received data on the DMX output (13). If a DMX signal is present, the DMX LED (3) will turn on. Refer to the DMX modes below for channel information.

"d3" DMX Mode – 3 channels

Press the Mode button (5) until the display shows "d3", indicating operation in 3 channel DMX mode or slave mode. Shortly after that, the display shows the DMX starting address. Set DMX address by using the UP/DOWN buttons (6/7).

In this mode, the knob (1) is disabled.

When set to this mode, the unit requires 3 DMX channels.

DMX channel	Value Range	Function
CH1	000-255	Red level
CH2	000-255	Green level
CH3	000-255	Blue level

Addressing has to be done as follows:

001 first device **(CH 1-3)** *factory default*
004 second device **(CH 4-6)**
007 third device **(CH 7-9)**
010 fourth device **(CH 10-12)** and so on.

This setting is stored even if the device is switched off.

Getting started: choosing a location

Risk of fire:

These units of passive RGB LED panels have been designed to work in dry indoor environments at environmental temperatures up to 105 degrees Fahrenheit.

Do not:

- Operate the units of passive RGB LED panels in environments with more than 105°F environmental temperature or more than 80% humidity.
- Operate the units of passive RGB LED panels in any closed environment, unless forced air convection is provided.
- Operate less than 24" distance from any flammable surface.

Getting started: secure mounting

The units of passive RGB LED panels can be mounted in various ways:

Floor standing operation

- Turn the bracket to the lower side of the unit and fold out the second bracket.
- Place the unit in a secure position.
- Use the provided cable slots in the bracket to route cables.
- Make sure to comply with cooling requirements of the power supply.

Hanging/Rigging, ceiling-mounted operation

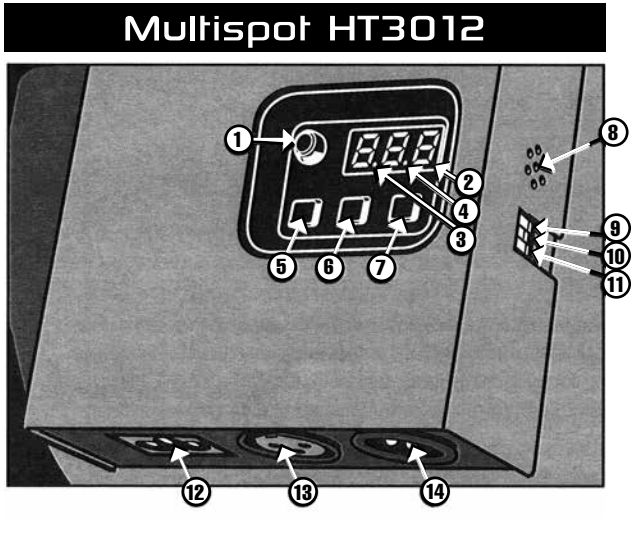
Risk of injury:

Overhead mounting requires extensive experience, including among others calculating working load limits, good knowledge of the installation material being used, and periodic safety inspection of all installation material and the unit. If you lack such qualifications, do not attempt the installation yourself. Improper installation can result in body injury. Be sure to complete all rigging and installation procedures before applying power to the unit.

- Leave the inner and outer bracket folded.
- The unit should be installed out of reach of people and areas where persons may walk or be seated.
- Make sure that the installation area can hold a minimum point load of 10 times the device's weight.
- In fixed installations, attach the unit with self-locking screws/nuts to the mounting point.
- When mounting the unit to truss be sure to secure an appropriately rated clamp, available from Apollo, to the hanging yoke through the center hole of the hanging yoke.
- Attach the supplied M6 safety lug to the rear side thread insert rigging point and secure the installation with an appropriate safety cable fixed to an individual separate mounting point. Be sure to only use the designated rigging point for the safety cable.
- Always use a certified safety cable that can hold 12 times the weight of the device when installing the unit. This secondary safety attachment should be installed in a way that no part of the installation can drop more than 9" if the main attachment fails.
- Never stand directly below the device when mounting, removing, or servicing the fixture.
- The installations should be inspected every year by a skilled person to ensure safety.
- Use the provided cable securing slots in the bracket to secure any cables using a cable tie.
- Make sure to comply with cooling requirements of the power supply.

Technical data:

	Multispot HT3012
LED's, total	12 RGB
LED's red	12
LED's green	12
LED's blue	12
LED type	3W RGB
Beam angle	25°
Power requirements	45W Max Current sensing
Weight	6.3 lbs (2.9 kg)



User interface overview:

1. In A-Mode:
   Speed Control (except A1= Mix Control)
   In C-Mode: Level-Control
2. Display showing the Mode,
   DMX-address, LOC-function etc.
3. Indicates presence of a DMX signal
4. Indicates the sound-activated mode
   (internal microphone)
5. MODE selection button
6. UP-button
7. DOWN-button
8. Internal microphone
9. Switches on or off the termination
   for the last unit in the DMX-chain
10. Switching the display on or off
    (with delay)
11. Maintenance (not in use)
12. VOLTAGE-Input 90-250VAC 50/60 Hz
    Auto Sensing
13. DMX-Output connector
14. DMX-Input connector

Operation

The HT3012 has several operating modes for internal and external operation.

"A" Auto Mode

Press the MODE button (5) until the first digit on the display shows "A", indicating operation in "auto" mode. Choose a pattern by using the UP/DOWN buttons (6/7), see list below.

NOTE: The "A" Mode is automatically disabled when an external DMX signal is present.

Use control knob (1) to mix color in pattern 1.
Use control knob (1) to select speed in pattern 2 through 27.
Use control knob (1) from 0 to 10% to activate sound control feature for pattern 10 through 18 and 23 through 27.
Use control knob (1) from 11 to 100% to control speed for pattern 10 through 18 and 23 through 27.

#	Description	Function of Knob (1)
A 0	All off	None
A 1	Static scene	Mix
A 2	Soft fade Red Green Mix	Speed
A 3	Soft fade Green Blue Mix	Speed
A 4	Soft fade Red Blue Mix	Speed
A 5	Soft fade Red Green Mix 2	Speed
A 6	Soft fade Green Blue Mix 2	Speed
A 7	Soft fade Red Blue Mix 2	Speed
A 8	Soft fade Blue Magenta Mix	Speed
A 9	Soft fade Red Green Blue	Speed
A10	Hard fade Red Green	Sound-activation, Speed
A11	Hard fade Green Blue	Sound-activation, Speed
A12	Hard fade Red Blue	Sound-activation, Speed
A13	Hard fade Red Amber	Sound-activation, Speed
A14	Hard fade Green Magenta	Sound-activation, Speed
A15	Hard fade Blue Magenta	Sound-activation, Speed
A16	Hard fade Light Blue Magenta	Sound-activation, Speed
A17	Hard fade Red Green Blue	Sound-activation, Speed
A18	Hard fade all colors	Sound-activation, Speed
A19	Random speed Red Yellow	None
A20	Random speed Blues	None
A21	Random speed Red Blue Magenta	None
A22	Random speed All	None
A23	Strobe White	Sound-activation, Speed
A24	Strobe Red	Sound-activation, Speed
A25	Strobe Green	Sound-activation, Speed
A26	Strobe Blue	Sound-activation, Speed
A27	Strobe Red Green Blue	Sound-activation, Speed